LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA001630-002

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: WPFC-75W-PCTS-BZ-PC - 60W and 5000K Setting
Surface mounted wall pack, cast aluminum housing, clear plastic enclosure with lightly textured general finish, linear lens above each row of LEDs with vertical linear micro prisms.
192 LEDs, 96 cool white and 96 warm white LEDs on white circuit board
One BQ BQE78-0720-100-PVF-PS LED driver

Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary					
Input Voltage	120.0	Vac	Luminous Flux	8207.6	Lumens
Input Current	0.5007	A	Total Efficacy	138.5	Lm/W
Input Power	59.25	W			
Frequency	60.00	Hz			
Power Factor	0.986		Roadway Type	Area Light	
Current THD	12.3	%	IES BUG Rating	B2 - U0 - G1	

This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 01/12/2022
Report date: 01/14/2022

Signed: Michael L. Grather

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USA east coast LightLab Int'l Allentown LLC, 905 Harrison Street, Suite 135, Allentown, PA 18103, Ph: +1 484-273-0705, www.lightlaballentown.com (issuing laboratory)
Australasia & S.E. Asia LightLab International, 50 Redcliffe Gardens Drive, Clontarf, Queensland, 4019, Australia, Ph : +61 7 3283 7862, Fx : +61 7 3283 8751, www.lightlabint.com

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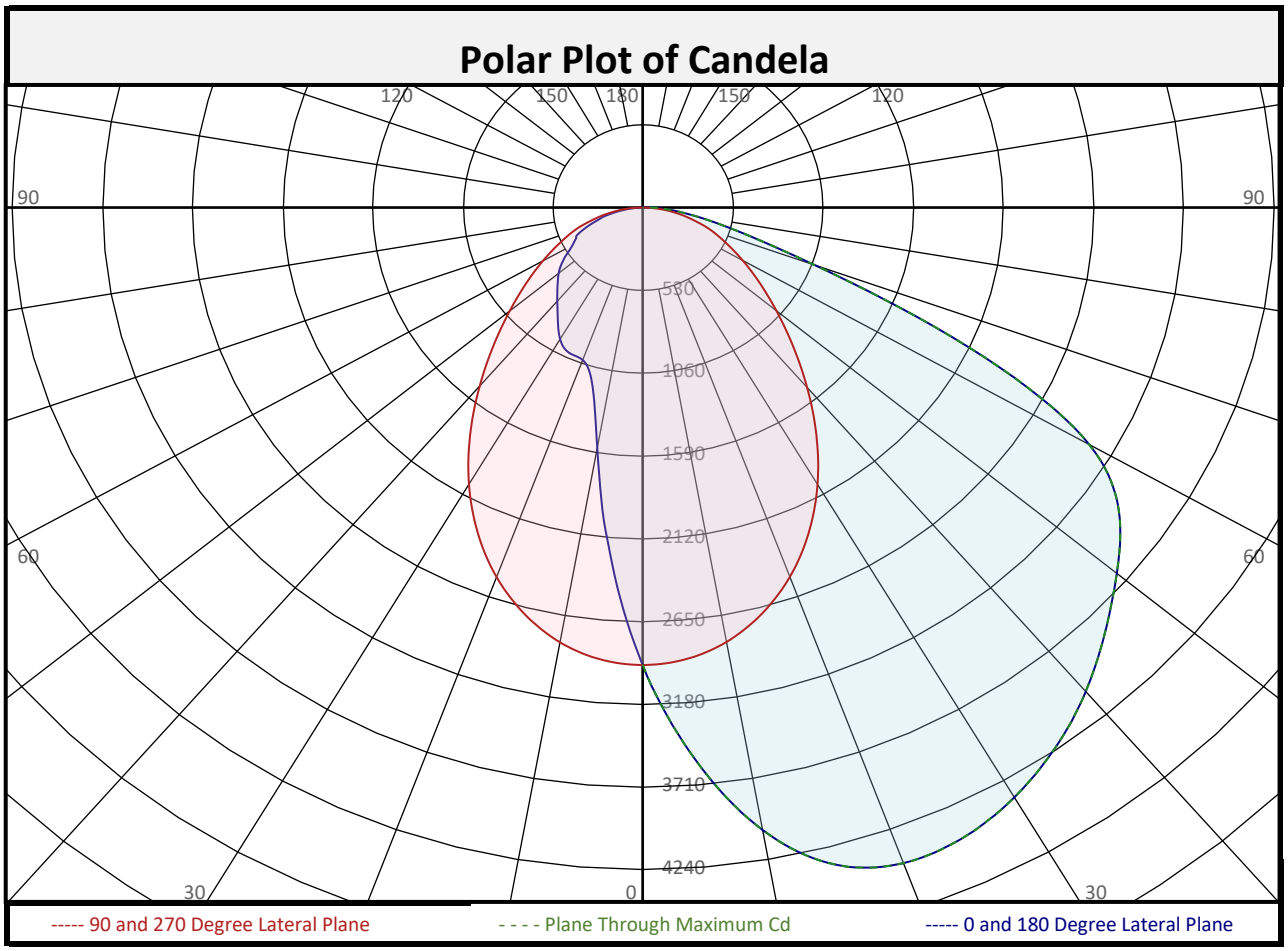

Zonal Flux Summary									
Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	273.6	3.3%	90-100	0.0	0.0%	0-20	1040	12.7%
10-20	766.7	9.3%	100-110	0.0	0.0%	0-30	2209	26.9%
20-30	1169	14.2%	110-120	0.0	0.0%	0-40	3629	44.2%
30-40	1420	17.3%	120-130	0.0	0.0%	0-60	6495	79.1%
40-50	1482	18.1%	130-140	0.0	0.0%	0-80	8068	98.3%
50-60	1384	16.9%	140-150	0.0	0.0%	10-90	7934	96.7%
60-70	1059	12.9%	150-160	0.0	0.0%	20-50	4070	49.6%
70-80	514.4	6.3%	160-170	0.0	0.0%	40-90	4579	55.8%
80-90	139.1	1.7%	170-180	0.0	0.0%	60-90	1713	20.9%
0-90	8208	100.0%	90-180	0.0	0.0%	0-180	8208	100.0%

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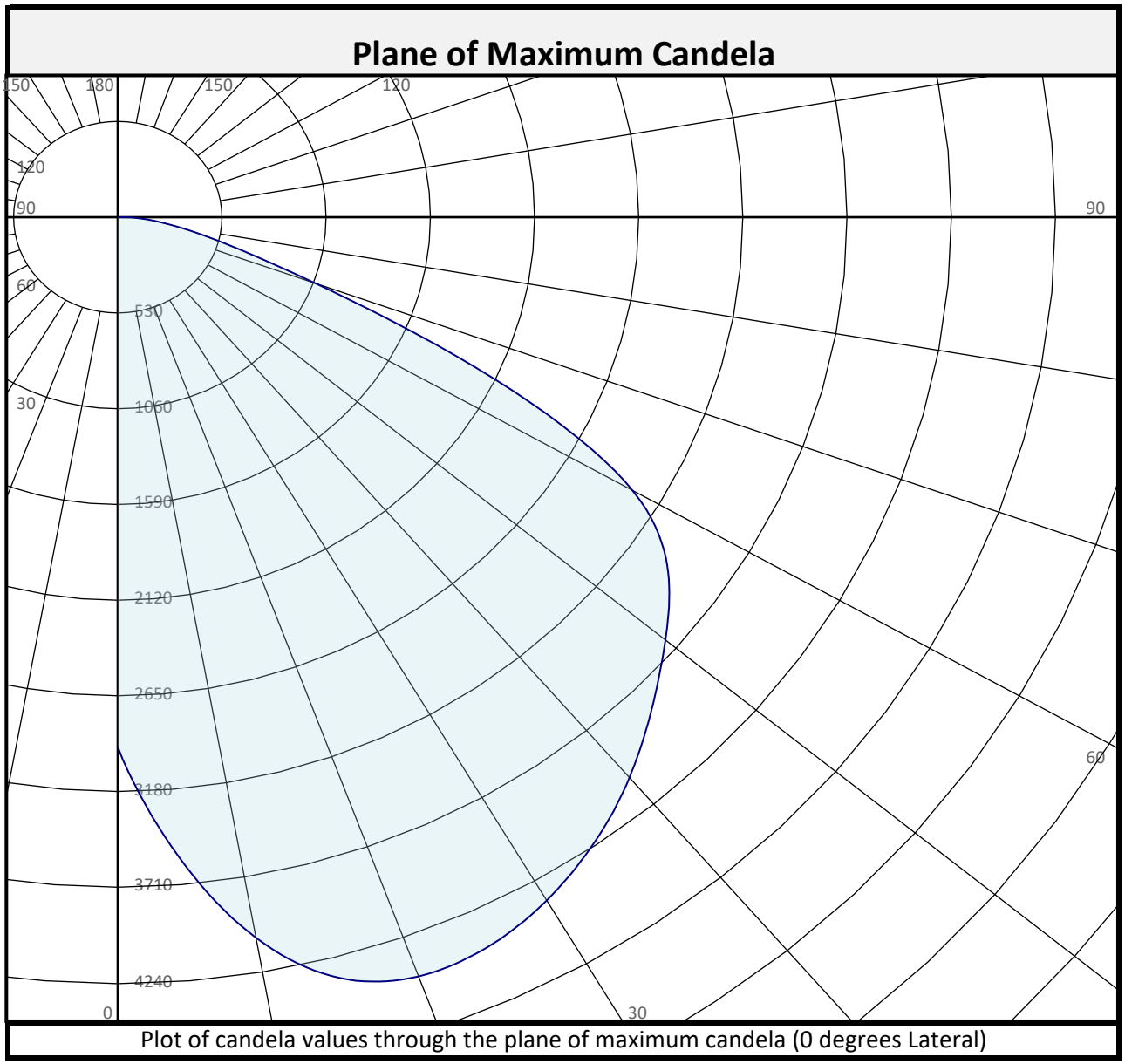

Plot of candela values through the plane of maximum candela (0 degrees Lateral)

Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	6318.5	77.0%	0.0	0.0%	6318.5	77.0%
House Side	1889.1	23.0%	0.0	0.0%	1889.1	23.0%
Total	8207.6	100.0%	0.0	0.0%	8207.6	100.0%

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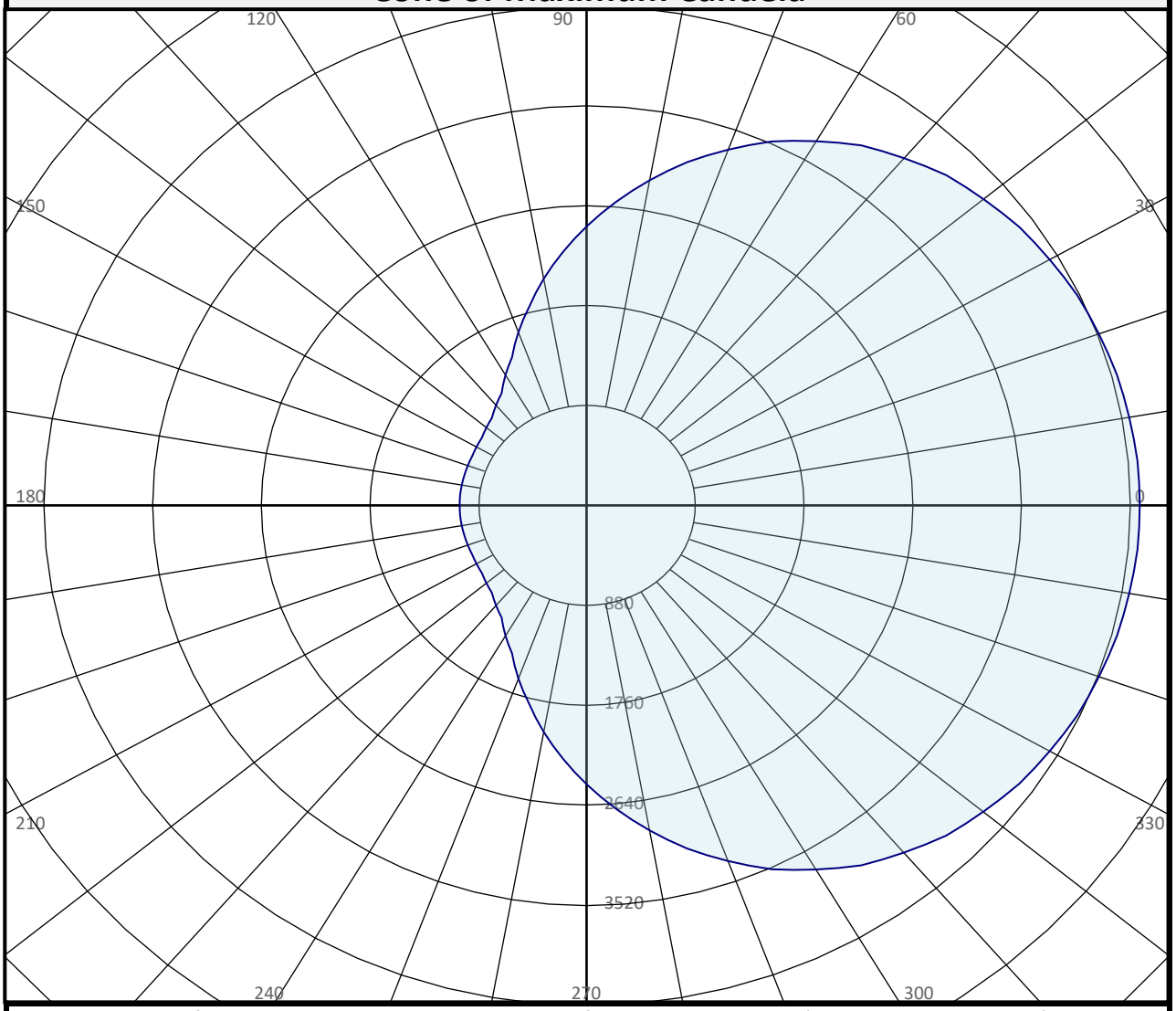
Cone of Maximum Candela



Plot of candela values through the cone of maximum candela (21.5 degrees Vertical)

Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	6318.5	77.0%	0.0	0.0%	6318.5	77.0%
House Side	1889.1	23.0%	0.0	0.0%	1889.1	23.0%
Total	8207.6	100.0%	0.0	0.0%	8207.6	100.0%

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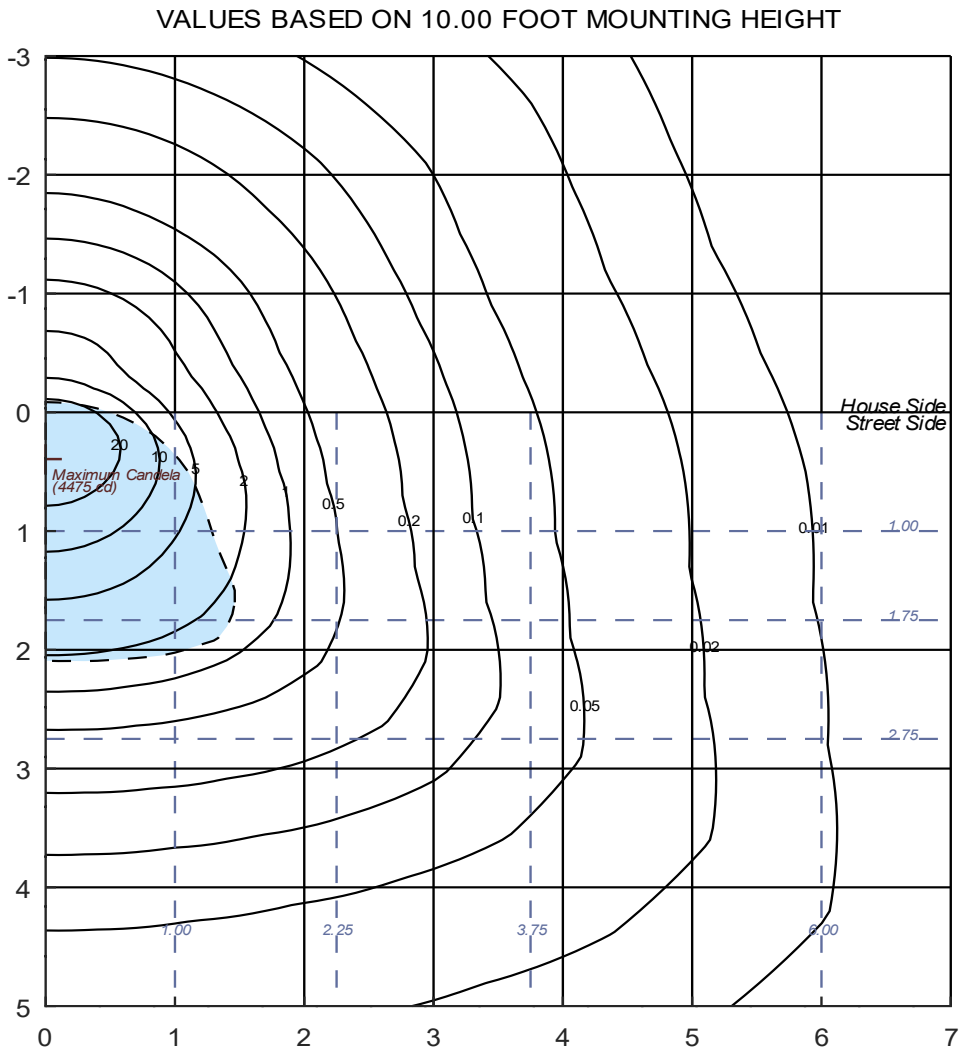
Iso-Illuminance Plot



The isofootcandle values shown in the plot above are based on a mounting height of h = 10.0 feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.

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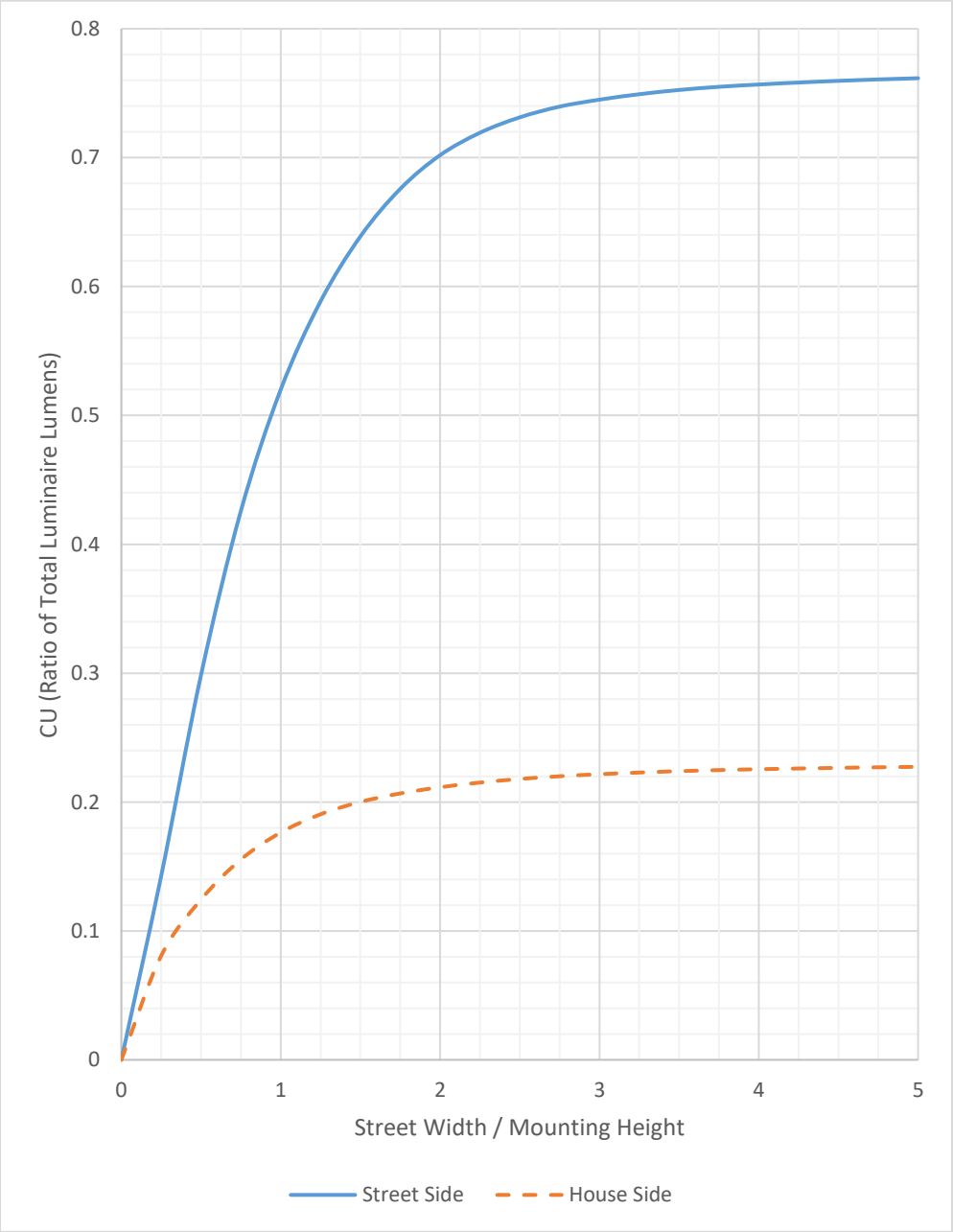
Coefficients of Utilization Plot



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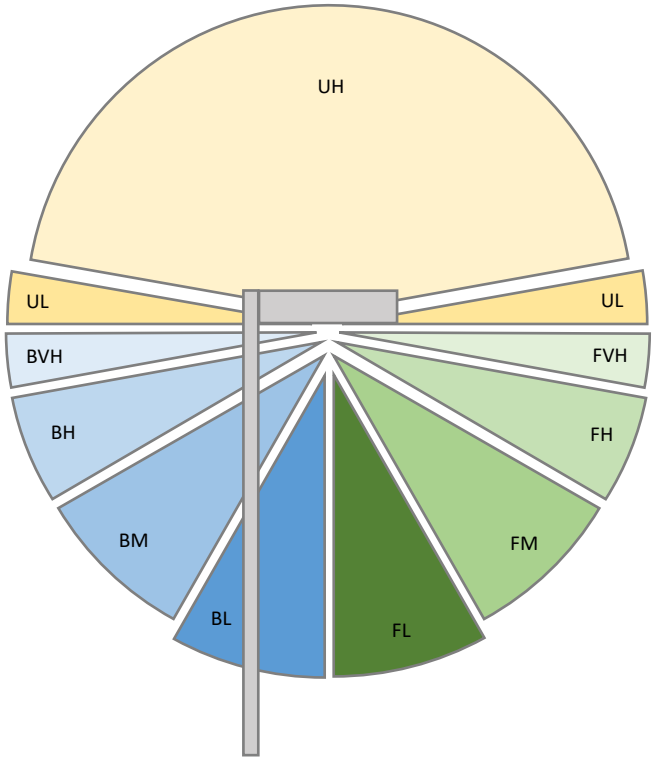
LCS Tables and Bug Classification



Back Light	
BL - Back Low (0°-30°)	623.5 Lm
BM - Back Mid (30°-60°)	883.2 Lm
BH - Back High (60°-80°)	342.8 Lm
BVH - Back Very High (80°-90°)	39.6 Lm

Forward Light	
FL - Forward Low (0°-30°)	1585.5 Lm
FM - Forward Mid (30°-60°)	3402.7 Lm
FH - Forward High (60°-80°)	1230.8 Lm
FVH - Forward Very High (80°-90°)	99.6 Lm

Uplight	
UL - Upward Low (90°-100°)	0.0 Lm
UH - Upward High (100°-180°)	0.0 Lm

BUG Ratings: B2 - U0 - G1

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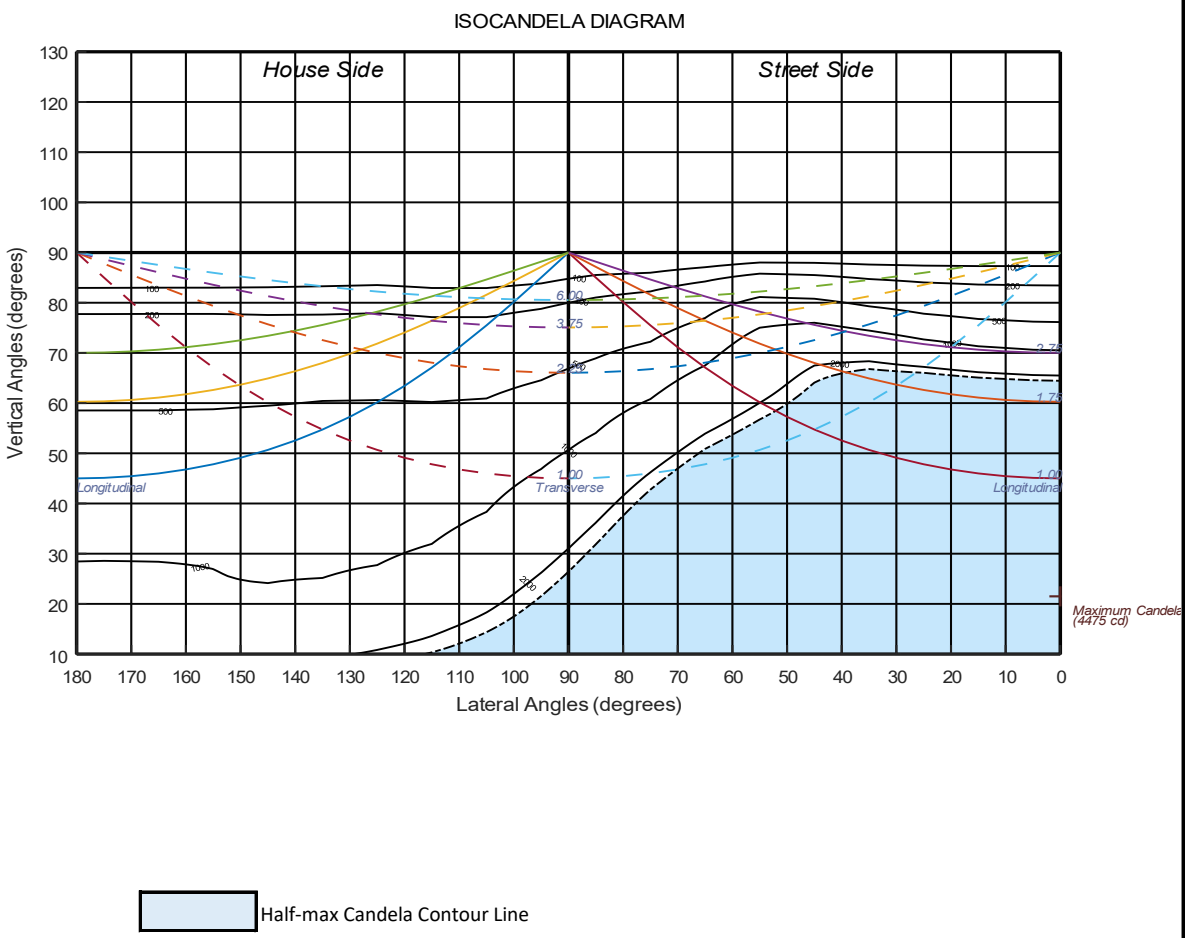
Iso-Candela Plot



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Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles										
	0	5	15	25	35	45	55	65	75	85	90
0	2929	2929	2929	2929	2929	2929	2929	2929	2929	2929	2929
2.5	3254	3255	3240	3222	3189	3154	3109	3059	3005	2951	2921
5	3549	3549	3525	3489	3430	3359	3273	3176	3069	2959	2902
7.5	3818	3817	3784	3733	3650	3547	3421	3278	3120	2956	2870
10	4046	4045	4007	3944	3843	3712	3550	3363	3156	2938	2824
12.5	4227	4226	4186	4117	4004	3853	3661	3433	3176	2906	2766
15	4355	4354	4315	4246	4127	3966	3749	3485	3181	2862	2695
17.5	4433	4433	4396	4329	4214	4048	3817	3521	3173	2804	2613
20	4470	4468	4435	4371	4262	4098	3858	3537	3151	2732	2521
22.5	4474	4472	4441	4381	4276	4117	3875	3536	3113	2648	2418
25	4455	4453	4421	4363	4262	4107	3867	3515	3061	2553	2305
27.5	4417	4416	4383	4323	4223	4071	3836	3476	2991	2448	2183
30	4366	4366	4331	4268	4165	4014	3782	3417	2906	2332	2055
32.5	4302	4303	4266	4199	4092	3938	3705	3338	2806	2203	1920
35	4227	4227	4190	4119	4005	3843	3610	3239	2691	2066	1781
37.5	4145	4142	4104	4029	3908	3736	3497	3123	2559	1923	1642
40	4051	4047	4009	3930	3799	3617	3366	2987	2413	1774	1504
42.5	3950	3946	3906	3824	3683	3486	3224	2835	2255	1623	1373
45	3846	3842	3800	3712	3561	3348	3069	2670	2086	1475	1248
47.5	3741	3738	3694	3600	3434	3201	2903	2492	1908	1331	1132
50	3640	3637	3590	3487	3304	3050	2729	2305	1725	1195	1026
52.5	3538	3535	3489	3378	3177	2895	2549	2111	1544	1071	928
55	3421	3420	3384	3273	3054	2741	2365	1916	1367	958	839
57.5	3266	3267	3250	3161	2940	2592	2184	1721	1200	857	757
60	3029	3038	3056	3016	2825	2451	2005	1529	1047	765	681
62.5	2638	2656	2730	2789	2680	2322	1833	1342	907	680	610
65	2112	2136	2256	2428	2462	2183	1673	1165	784	605	545
67.5	1538	1561	1698	1942	2135	1999	1521	1000	676	537	486
70	1076	1093	1203	1434	1716	1760	1362	850	579	473	430
72.5	772	783	856	1025	1288	1458	1190	715	490	406	370
75	572	578	622	730	928	1128	1002	590	406	339	308
77.5	426	430	455	522	653	825	797	475	332	281	254
80	316	318	331	369	448	570	590	368	261	223	200
82.5	226	227	234	254	297	372	401	266	193	168	148
85	157	158	160	169	189	224	243	171	125	112	95
87.5	96	96	96	98	103	114	120	87	61	54	44
90	0	0	0	0	0	0	0	0	0	0	0

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Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.		Lateral (C-Plane) Angles										
		0	5	15	25	35	45	55	65	75	85	90
	90	0	0	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0
	102.5	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0
	107.5	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0
	112.5	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0
	117.5	0	0	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0	0	0
	122.5	0	0	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0	0	0
	127.5	0	0	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0	0	0
	132.5	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0
	137.5	0	0	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0	0
	142.5	0	0	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0	0	0
	147.5	0	0	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0	0	0
	152.5	0	0	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0	0	0
	157.5	0	0	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0	0	0
	162.5	0	0	0	0	0	0	0	0	0	0	0
	165	0	0	0	0	0	0	0	0	0	0	0
	167.5	0	0	0	0	0	0	0	0	0	0	0
	170	0	0	0	0	0	0	0	0	0	0	0
	172.5	0	0	0	0	0	0	0	0	0	0	0
	175	0	0	0	0	0	0	0	0	0	0	0
	177.5	0	0	0	0	0	0	0	0	0	0	0
	180	0	0	0	0	0	0	0	0	0	0	0

Report of Test

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Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles										
	90	95	105	115	125	135	145	155	165	175	180
0	2929	2929	2929	2929	2929	2929	2929	2929	2929	2929	2929
2.5	2921	2889	2833	2779	2727	2682	2645	2616	2594	2587	2581
5	2902	2842	2728	2617	2515	2424	2347	2287	2243	2227	2220
7.5	2870	2781	2609	2446	2289	2155	2055	1975	1914	1885	1878
10	2824	2710	2481	2263	2068	1906	1758	1654	1587	1557	1551
12.5	2766	2625	2345	2077	1851	1642	1497	1400	1342	1316	1312
15	2695	2531	2200	1905	1627	1427	1299	1223	1181	1164	1160
17.5	2613	2425	2048	1716	1435	1260	1162	1111	1087	1078	1076
20	2521	2312	1897	1535	1281	1142	1075	1048	1040	1040	1039
22.5	2418	2191	1754	1379	1163	1060	1021	1017	1025	1031	1030
25	2305	2064	1609	1248	1074	1003	992	1006	1021	1028	1027
27.5	2183	1932	1461	1143	1005	964	976	997	1008	1012	1011
30	2055	1795	1326	1057	951	938	962	977	980	978	976
32.5	1920	1661	1209	985	907	916	939	943	936	930	928
35	1781	1528	1110	923	871	892	905	898	885	878	876
37.5	1642	1401	1026	868	840	862	863	849	836	830	828
40	1504	1281	951	819	809	825	818	803	793	788	787
42.5	1373	1171	883	775	776	785	774	763	754	749	748
45	1248	1070	821	734	741	742	734	724	717	713	713
47.5	1132	977	763	695	703	702	695	688	683	680	680
50	1026	892	709	656	663	664	660	655	650	648	648
52.5	928	812	657	618	623	627	625	618	614	611	611
55	839	738	608	580	588	591	587	579	570	567	567
57.5	757	670	562	542	551	553	544	529	520	518	518
60	681	606	516	503	511	509	488	476	477	479	479
62.5	610	546	472	463	466	451	439	438	447	451	451
65	545	490	428	421	413	403	400	409	428	433	433
67.5	486	438	383	372	365	361	374	386	391	392	392
70	430	389	338	323	322	334	339	338	340	342	342
72.5	370	335	290	277	293	296	291	289	290	292	291
75	308	277	238	235	256	248	244	242	248	252	253
77.5	254	226	193	194	208	202	201	205	206	205	205
80	200	176	150	149	162	162	158	156	157	157	157
82.5	148	127	108	107	119	116	110	109	109	109	108
85	95	77	65	67	71	69	68	67	66	64	64
87.5	44	32	29	32	32	32	31	28	26	25	25
90	0	0	0	0	0	0	0	0	0	0	0

Report of Test

LLIA001630-002

Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles										
	90	95	105	115	125	135	145	155	165	175	180
90	0	0	0	0	0	0	0	0	0	0	0
92.5	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0
97.5	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0
102.5	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
107.5	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0
117.5	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0
122.5	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0
132.5	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0
137.5	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0
142.5	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0
152.5	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0
157.5	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0

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Additional Pictures of Test Subject

Report of Test

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Test Distance	9.5 m
Ambient Temperature	24.8 °C

Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of publications: IES LM-79-19. Format of reports and angular increments based on IES LM-31-20 and LM-10-20.

The luminous intensity values, and other derived quantities, contained in this report are based on absolute data.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the IES C-Type spherical coordinate system as defined in IES LM-75-19.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

The device under test emits no detectable uplight, as defined by ANSI/IES LM-31-20. For the purpose of this report, certain non-zero uplight readings, attributable to instrument artifacts, have been assigned a zero value.